

Application No. 09/902,466
Amendment dated June 21, 2006
Reply to Office Action dated December 22, 2005

Remarks

Claims 1-17 are pending.

Claims 1-3, 5-16 stand rejected

Claim 5 has been amended.

Claim 17 has been added.

Claims 1-3, 5-16 are presented herein for review.

No new matter has been added.

In paragraph 3 of the Office Action dated December 22, 2005, the examiner objected to claim 5 as being dependant on a cancelled claim. Claim 5 has been amended as suggested. Applicant respectfully requests withdrawal of the objection.

In paragraph 5, the Examiner has rejected claims 1-3, 8-9, 12 and 14 under 35 U.S.C. § 103(a) as being anticipated by Andersson et al. (U.S. Patent No. 6,693,894) in view of Song (U.S. Patent No. 6,694,019). In paragraph 7 of the Office Action, the Examiner has rejected claims 5, 10-11 and 13 under 35 U.S.C. 103(a) as being unpatentable over Andersson in view of Song in further view of Albal (U.S. Patent No. 6,668,046). In paragraph 8 of the Office Action, the Examiner has rejected claims 6-7 and 15-16 under 35 U.S.C. 103(a) as being unpatentable over Andersson in view of Song in further view of Lee et al. (U.S. Patent No. 6,847,632).

Applicant respectfully disagrees with the Examiner's contentions and submits the following remarks in response.

Applicant asserts that the invention of Song (cited in Fig. 4, element 170; Col. 1, lines 36-63 and its description) is different than the echo canceller claimed in the present invention, and

Application No. 09/902,466
Amendment dated June 21, 2006
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that combining the teaching of Song to the invention of Andersson would materially degrade the system and teach away from the claimed invention.

Song teaches a device that detects an echo generated from an infinite return loss condition (IRL) and either bypasses or temporarily halts operation of an echo canceller during this condition. (Col. 1, lines 65-67; Col. 2, lines 1-3) An IRL condition exists when the signal level of an incoming far end signal exceeds the signal level of an outgoing near-end signal by a substantial far end signal. While Song discloses that his device may be used in the context of an Internet Protocol phone (Col. 1, lines 48-50), Song clearly states that his device only works for echoes caused by IRL conditions such as those that occur when “the echo canceller of the switching device effectively applies additional echo (e.g. the estimated echo) to the outgoing signal” (Col. 1, lines 51-53). Song does not teach an echo canceller/equalizer module configured to correct distortions in phone signals caused by the travel of the phone signal through free air, server delays, and internet delays, as claimed in claims 1, 14 and dependent claims. Song’s invention, when used in the context of VoIP, works by “bypassing or temporarily halting operations of the echo canceller” (Col. 2, lines 1-2) to prevent additional echo from the switching device. *Song merely teaches a device to compensate for the excessive echo cancellation of a switching device.* Song is silent as to how to cancel the echo effects inherent in internet telephony caused by transmission delays, or the echo effects common to phone signals traveling through free air.

The Andersson invention is also silent as to echo cancellation. No combination of the references cited by examiner would result in the claimed invention. In fact, combining the teaching of Song to the invention of Anderson would teach away from the claimed invention and may in fact introduce echo effects by suppressing any echo cancellation that may be present in

Application No. 09/902,466
Amendment dated June 21, 2006
Reply to Office Action dated December 22, 2005

the Andersson invention.

Furthermore, the present invention employs separate cell tower echo cancellers (Fig. 2, 48 & 48') and internet protocol interface echo cancellers (Fig. 2, 54 & 54'). The former eliminates echo caused by the travel of the phone signal through free air while the latter eliminates echo caused by internet and phone delays. This design prevents echo caused by cell phone transmissions from being propagated through the VoIP network, and the echo caused by internet and server delays from being propagated through the cell phone network.

This design feature has been made more explicit in newly added claim 17, which claims, among other things, first and second internet protocol interfaces that each maintains an echo canceller/equalizer module configured to correct distortions in a phone signal caused by server and internet delays, and in which the phone signal is transmitted to and from said first and second internet protocol interface by means of a first and second cell tower equipped with an additional echo canceller/equalizer configured to correct distortions in said phone signal caused by the travel of said phone signal through the free air. No combination of any of the references cited by examiner, including Andersson modified in view of Song, teaches, discloses, or suggests this claimed feature.

For these reasons, Applicant respectfully requests that the rejection of independent claims 1 and 14 be withdrawn. Furthermore, as claims 2-3, 5-13 and 15-16 depend from claims 1 and 14, the rejection of these claims should be withdrawn for the same reasons.

In view of the foregoing, Applicants respectfully submit that pending claims 1-3 and 5-17 are in condition for allowance, the earliest possible notice of which is earnestly solicited. If the Examiner feels that an interview would facilitate the prosecution of this Application he is invited

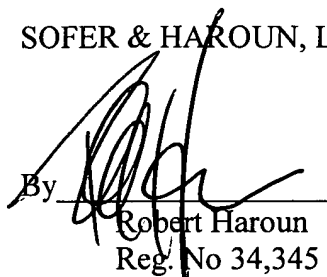
Application No. 09/902,466
Amendment dated June 21, 2006
Reply to Office Action dated December 22, 2005

to contact the undersigned at the number listed below.

Respectfully submitted,

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By

A handwritten signature in black ink, appearing to be 'R. Haroun', is written over a horizontal line.

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